

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:		BECKER KURIG STRAUS BAVARIASTRASSE 7 80336 MÜNCHEN 09. Dez. 2004 WV: / LF:		NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty) (PCT Rule 71.1)	
Becker Kurig, Straus Bavariastrasse 7 DE-80336 München Tyskland				Date of mailing (day/month/year) 07-12-2004	
Applicant's or agent's file reference 51196 W0			IMPORTANT NOTIFICATION		
International application No. PCT/IB2002/003890		International filing date (day/month/year) 20-09-2002		Priority date (day/month/year)	
Applicant Nokia Corporation et al					

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see Also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/ Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 86		Telex 17978 PATOREG-S	Authorized officer Riitta Vartiainen Telephone No. 08-782 25 00
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 51196 WO		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/IB2002/003890		International filing date (day/month/year) 20/09/2002	Priority date (day/month/year) -
International Patent Classification (IPC) or national classification and IPC H04H 1/00, H04Q 7/32, H04M 11/08, H04 9/00			
Applicant Nokia Corporation et al			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>5</u> sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 02-03-2004		Date of completion of this report 24-11-2004	
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88		Authorized officer Nabil Sebaa/MN Telephone No. +46 8 782 25 00	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/IB2002/003890

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 12 - 16 received by this Authority on 17/11/2004
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 23 - 24
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/IB2002/003890

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-23</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-23</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-23</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The invention concerns a method, device and system for providing additional and updated information related to the contents of a radio broadcast to mobile terminal devices.

The problem to be solved by the invention relates to the waste in network resources as additional information concerning the broadcast is to be delivered to a mobile station. An additional problem to be solved concerns the difficulties in delivering selectively additional information to a certain user (user of a mobile terminal).

The object of the invention is to optimize the data exchange between a user device and a radio station without a waste of network resources and to provide a system that is capable of selectively delivering additional information to a certain user.

The invention claimed in claims 1-23 and filed with the letter of 17/11/2004 differs from the invention claimed in originally filed claims 1-25 in that original pending claims 23 and 24 have been deleted. In addition, the new claims 1 to 23 have been clarified in that the additional information data have been specified to be related to a current radio broadcast. It is further clarified that the additional information, wherein received at the terminal device, is updated additional information. It is additionally emphasized that a connection is provided between the radio station and the server for transferring additional information data of the current radio broadcast. The second feature is found in original claim 25. Finally, the new claim 23 is disclosed in the original claim 25.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Cited documents:

D1: EP 1113605 A2
D2: WO 02052815 A2
D3: DE 10053739 A1
D4: EP 0725489 A1

The cited documents represent the general state of the art. The invention defined in new claims 1-23 filed with the letter of 17/11/2004 is not disclosed by any of these documents.

In D1, the downloadable information is obtained at a later point in time and is not regularly updated and can not be available at the time a broadcast is sent. Furthermore, in D1 there exists no second wireless path via which updated additional information could be sent which is the case in the claimed invention.

D2 also fails in providing two different communication paths used to deliver certain combined information related to a current broadcast.

For the same reasons presented above concerning D1, D3 is also considered to represent the general state of the art.

D4 also fails in disclosing the transmission of updated information related to a current broadcast, since D4 describes a broadcasting station for mobile devices, which was relevant to deleted claim 24.

Therefore, the cited prior art disclosed in D1-D4 does not give any indication that would lead a person skilled in the art to the claimed methods, system, network server and mobile device for providing via a second path updating additional information related to the contents of a current radio broadcast sent via a first path; and to selectively delivering additional information to a certain user. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in new claims 1-23 is novel and is considered to involve an inventive step. The invention is industrially applicable.

International Application No. PCT/IB2002/0 3890
Applicant: Nokia Corporation
Date November 09, 2004

New Claims

1. Method for providing broadcast data comprising a broadcast being sent from a broadcast station and update additional information data related to said current radio broadcast, said broadcast data being provided to at least one mobile terminal device, said mobile terminal device being connected to a server in a wireless data network, said at least one mobile terminal device comprising components for receiving said broadcast from said at least one broadcast station and for receiving said update additional information data from said server, comprising:
 - receiving at the server said update additional information data of said current radio broadcast from said at least one broadcast station, via a network connection between said server and said radio station,
 - determining at least one mobile terminal device to be supplied with said update additional information data of said current radio broadcast, and
 - updating said update additional information data of said current radio broadcast with said at least one determined mobile terminal device via said wireless communication network.
2. Method according to claim 1, wherein said server uses a presence database for determining said at least one mobile terminal device to be updated with said update additional information data of said current radio broadcast.
3. Method according to claim 1 or 2, wherein said update additional information data of said current radio broadcast from said at least one broadcast station is received from at least one second server connected to said at least one broadcast station.
4. Method according to any one of claims 1 to 3, wherein said broadcast station comprises one of said servers, wherein said update additional information data is received from a component within said broadcast station.
5. Method according to anyone of the preceding claims, further comprising determining whether said update additional information data of said current radio broadcast received from said broadcast station has changed, and updating said update

additional information data only, if said update additional information data has changed.

6. Method according to anyone of claims 1 to 5, further comprising:
 - receiving a transmission from a mobile terminal device indicating that said mobile terminal device is to be supplied with said update additional information data,
 - determining said mobile terminal device as to be supplied with said update additional information data, and
 - sending said update additional information data of said current radio broadcast to said mobile terminal device via said wireless communication network.
7. Method according to anyone of the preceding claims, further comprising:
 - receiving a transmission indicating that said mobile terminal device is no longer to be updated with said update additional information data.
8. Method for receiving broadcast data in a mobile terminal device, said broadcast data comprising a broadcast being sent from at least one broadcast station and update additional information data related to said current radio broadcast, said mobile terminal device being connected to a server in a wireless data network, said at least one mobile terminal device comprising components for receiving said broadcast from said at least one broadcast station and for receiving said update additional information data from said server, comprising:
 - receiving said broadcast from said broadcast station via a wireless broadcast channel,
 - receiving said update additional information data of said current radio broadcast, from said server via said wireless communication network, and
 - updating said update additional information data of said current radio broadcast on said mobile terminal device.
9. Method according to claim 8, further comprising displaying said updated additional information data of said current radio broadcast on said mobile terminal device.
10. Method according to claim 9, further comprising processing said update additional information data of said current radio broadcast for display.
11. Method according to one of claim 8 to 10, further comprising transmitting a message to a server in said wireless communication network to initiate the transmission of said update additional information data related to the contents of said currently received

broadcast.

12. Method according to anyone of claims 8 to 11, further comprising determining a name of said broadcast station transmitting said broadcast.

13. Method according to one of claims 8 to 12, further comprising displaying the name of said determined broadcast station and said received update additional information data of said current radio broadcast together on a display.

14. Method for providing broadcast data comprising a broadcast being sent from a broadcast station and update additional information data related to said current radio broadcast to at least one mobile terminal device, said broadcast being available for said at least one mobile terminal device, and said update additional information data being available for said at least one mobile terminal device, said mobile terminal device being connected to a server in a wireless data network, said at least one mobile terminal device comprising components for receiving said broadcast from said at least one broadcast station and for receiving said update additional information data from said broadcast station via said server, comprising:

- transmitting said broadcast from said at least one broadcast station to said at least one mobile terminal device,
- transmitting said update additional information data of said current radio broadcast from said at least one broadcast station to said server, via a network connection between said server and said radio station,
- determining at the server at least one mobile terminal device to be supplied with said update additional information data of said current radio broadcast,
- updating said update additional information data of said current radio broadcast to said at least one determined mobile terminal device via said wireless communication network, and
- displaying said broadcast and said update additional information data of said current radio broadcast on said mobile terminal device.

15. Software tool comprising program code means stored on a computer readable medium for carrying out the method of anyone of claims 1 to 14 when said software tool product is run on a mobile terminal or network device.

16. Computer program product for providing update additional information data of a broadcast transmission via a network on a mobile terminal device, comprising loadable

program code means for carrying out the steps of anyone of claims 1 to 14 when said program is run on a mobile terminal or a network device.

17. Computer program product comprising program code means stored on a computer readable medium for carrying out the method of anyone of claims 1 to 14 when said program product is run on a mobile terminal or network device.

18. Network server for providing update additional information data related to the contents of at least one current radio broadcast from at least one broadcast station, said update additional information data to be supplied to at least one mobile terminal device, comprising:

- a network module for receiving said update additional information data from said broadcast station via a network connection between said server and said radio station,
- a database for storing indications of said at least one mobile terminal device to be updated with said update additional information data,
- a controller being connected to said network module, for processing update additional information data, and connected to said database for receiving said indications of said at least one mobile terminal device and for determining at least one mobile terminal device to be supplied with said update additional information data, and
- a wireless network module connected to said controller for updating said update additional information data to said determined mobile terminal devices.

19. Mobile terminal device, capable of displaying updated additional information data related to the contents of a current radio broadcast received from a broadcast station, comprising:

- a radio module for receiving said broadcast,
- a wireless network module for receiving said update additional information data of said current radio broadcast,
- a controller for processing said received updated additional information data of said current radio broadcast, said controller being connected to said wireless network module,
- a memory connected to said controller for storing said processed updated additional information data of said current radio broadcast, and
- a display module connected to said controller for displaying said processed updated additional information data of said current radio broadcast.

20. Mobile terminal device according to claim 19, wherein said radio module is connected to said controller, and wherein said radio module is connected to said wireless

network module to transfer data from said radio module to said wireless network module.

21. Mobile terminal device according to claim 19 or 20, wherein said radio module comprises a radio data system (RDS) module for determining said broadcast station.

22. Mobile terminal device according to anyone of claims 19 to 21, further comprising a cellular telephone module being connected to said controller.

23. System for providing broadcast data comprising a broadcast station for sending a broadcast and for providing update additional information data related to the contents of said current radio broadcast;

a network server for receiving said update additional information data, wherein said update additional information data to be supplied to at least one mobile terminal device, said network server comprising:

- a network module for receiving said update additional information data of said current radio broadcast from said broadcast station via a network connection between said server and said radio station,
- a database for storing indications of said at least one mobile terminal devices to be updated with said update additional information data,
- a controller being connected to said network module, for processing said update additional information data, and being connected to said database for receiving said indications of said at least one mobile terminal device and for determining at least one mobile terminal device to be supplied with said update additional information data of said current radio broadcast, and
- a wireless network module connected to said controller for updating said update additional information data to said determined mobile terminal devices, and

a mobile terminal device capable of displaying said update additional information data of said current radio broadcast, comprising:

- a radio module for receiving said current radio broadcast,
- a wireless network module for receiving said update additional information data of said current radio broadcast,
- a controller for processing said received update additional information data of said current radio broadcast, said controller being connected to said wireless network module,
- a memory connected to said controller for storing said processed update additional information data of said current radio broadcast, and
- a display module connected to said controller for displaying said processed update additional information data of said current radio broadcast.

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